

## REMARKS

Claims 1-80 are currently pending in the application. Reconsideration of this application is respectfully requested.

### Objection on Drawings

The Office Action objected to the Figures because the labeling and some figures do not appear to be uniformly thick and well-defined. Applicants have included herein formal drawings. Accordingly, this objection is traversed.

### Objection on Abstract

The Office Action objected to the abstract because it exceeds the maximum length of 150 words under MPEP § 608.01(b). The abstract has been amended to keep it within 150 words. Consequently, this objection is traversed.

### Claim Rejections under 35 USC § 103

The Office Action rejected Claims 1-49, 51-60, 62-71 and 73-80 under 35 USC § 103 as being unpatentable over U.S. Patent No. 5,076,688 to Bowen et al. ("Bowen") in view of U.S. Patent No. 6,305,848 to Gregory ("Gregory"). To establish a prima facie case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). MPEP Section 2143.03. Without admitting that Bowen and Gregory are prior art and reserving the right to establish that Bowen and Gregory are not prior art, Applicants respectively submit that the presently claimed invention is patentable over Bowen in view of Gregory because the combination fails to disclose all limitations claimed in the present invention.

The present invention discloses an attenuator and/or conditioner "that functions to modify the performance of the array of optoelectronic devices." See specification at page 24, lines 16-17. A purpose of the present invention is to provide an attenuator designed to

attenuate the optical output from the optoelectronic devices while the optoelectronic devices are operated within an efficient power range. See specification at page 24, lines 17-20. For example, the attenuator, in one aspect of the present invention, is situated "in the gap that exists between the first end of the optoelectronic devices and the first end of the optical fiber" such that "the attenuator would function to absorb some of the light emitted by the optoelectronic devices." See specification at page 25, lines 1-3. Claim 1 of the present invention recites in part:

- d) an optical path extending from the first end of the array of optoelectronic devices, proceeding into the array of optical elements and terminating at the second end of the array of optical elements; and
- e) an attenuator in the optical path, where the attenuator is capable of attenuating the optical energy emitted from one or more optoelectronic devices.

(Emphasis added). As claimed, an attenuator for attenuating the optical energy emitted from optoelectronic devices is situated in an optical path, which extends from the first end of the array of optoelectronic devices to the second end of the array of optical elements. As described in the specification of the present invention, the optical element may be "a lenslet array, diffractive optic array, a lens filter, pipette, capillary tube or optical fibers." See specification at page 20, lines 13-14. If the optical element were a lenslet array, for example, the optical path would extend from the first end of the array of optoelectronic devices to the second end of the lenslet array. The attenuator, according to the present invention is situated in the optical path for attenuating optical energy emitted from optoelectronic devices, wherein the optical path extends from the first end of optoelectronic devices to the second end of the lenslet array.

For at least the reason stated above, Applicants submit that Bowen does not disclose, teach or suggest the present invention. Bowen does not disclose an attenuator situated in an

optical path as defined by the present invention. Bowen essentially discloses a metalized optical fiber used as an attenuator that simulates the loss of optical energy transmitted through a large cable network.

The optical path in Bowen's device as defined by the present invention begins at the first end of active device 21 and end at the second end of lens 25. Since metalized optical fiber 11 of Bowen is not within the optical path as described above, Bowen does not disclose, teach, or suggest the claimed invention under §102 or §103. Accordingly, Applicants respectfully disagree with the assertion made in paragraph 6 of the Office Action that Bowen (Figure 1-3, col 5 Ln 53-Col 6 Ln 28 and Claims 1, 2 and 4) discloses an attenuator comprising the first end surface of the optical element, capable of attenuating the optical energy emitter from the optoelectronic device, in the optical path (See page 3 of the Office Action). As discussed above, Bowen's attenuator is not in the optical path as defined by the presently claimed invention.

In paragraph 7 of the Office Action, the Examiner correctly states that "Bowen et al. does not describe the apparatus as having an array of optoelectronic devices or an array of optical elements." See page 3 of the Office Action. However, the Examiner asserts that "Gregory describes a device having arrays of optoelectronic devices (28, 60, 62, 64, 66) and a plurality of optical fibers." See page 3 of the Office Action. The Examiner further asserts that "[i]t would have been obvious to one of ordinary skill in the art to modify the mating optical connector described by Gregory to have multiple implementations of the simulator described by Bowen et al. to allow for testing of the multiple optical transceivers described by Gregory." See page 3 of the Office Action.

Bowen is directed to a testing apparatus in which an attenuator is used to simulate energy loss in a network. Gregory, on the other hand, is directed to an apparatus for sending and/or receiving signals over a network. A skilled artisan would not be motivated

to include the attenuator of Bowen in the apparatus of Gregory because there is no motivation or need to simulate energy loss in the network. Even assuming for the sake of argument that Bowen and Gregory were combined, the combination would still fail to teach or suggest an attenuator in the optical path, that is capable of attenuating the optical energy emitted from one or more optoelectronic devices as claimed in the present invention. Gregory has never suggested or mentioned attenuating optical energy emitted from optoelectronic devices. Similarly, Bowen's attenuator is not in the optical path as defined by the presently claimed invention. Accordingly, one of ordinary skilled in the art would not combine Bowen and Gregory, because even if they were combined, the combination would still fail to disclose or suggest all limitations disclosed in claimed invention. Furthermore, if Bowen and Gregory were combined, the combination would teach away from the presently claimed invention as described above. It is improper to combine references where the references teach away from their combination. In *re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983). Therefore, Claims 1 is patentable over Bowen in view of Gregory under Section 103.

Moreover, neither Bowen nor Gregory has suggested or indicated that they can be combined to make the present invention. MPEP §2143.01 states that "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). A desired outcome that the invention provides cannot be used as the motivation to combine the references if there is no such teaching in the references. Since neither Bowen nor Gregory teaches or suggests combining Bowen and Gregory, Applicants contend that there is no teaching to combine.

It is well established that a proper §103 combination rejection requires more than just finding in the references the limitations recited in the claim. To reach a proper teaching

of method through a combination of references, there must be stated an objective motivation to combine the teachings of the references, not a hindsight rationalization in light of the disclosure of the specification being examined. MPEP 2143 and 2143.01. See also, for example, *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988), *In re Laskowski*, 10 USPQ2d 1397, 1398 (Fed. Cir. 1989). As stated in *In re Fine* at 5 USPQ2d 1598:

“The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. See *In re Piasecki*, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-87 (Fed. Cir. 1984). It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.”

And, at 5 USPQ2d 1600:

“One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.”

According to the MPEP, the Examiner needs to provide an objective basis for combining the teachings of the applied prior art. MPEP 2143.01 provides instructions as to what must be shown in order to extract specific teachings from various references:

“Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention when there is some teaching, suggestion, or motivation to do so found either in the references themselves or the knowledge generally available to one of ordinary skill in the art. *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ 1941 (Fed. Cir. 1992).” “A statement that modifications of the prior art to meet the claimed invention would have been ‘well within the ordinary skill of the art at the time the claimed invention was made’ because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd.Pat.App.&Inter. 1993).”

The instant rejection under §103 fails to show any objective basis for combining the teachings of the references in the manner used by this rejection, and selecting the helpful portions from each reference while ignoring the unhelpful portions. An objective basis is

one set forth in the art or which can be established by a declaration. If the rejection is maintained, Applicants respectfully request the Examiner to provide the objective basis for combining the teachings of Bowen and Gregory.

The Office Action further states that ‘[w]hile Bowen does not specifically describe the attenuating coating applied to the optoelectronic device or the second end of the optical fiber, it would have been obvious to one of ordinary skill in the art that such a coating would work equally well in any such position along the optical path and that placement of the coating could be changed for considerations such as ease of assembly.’’ See paragraph 8 of the Office Action on page 3, line 21 to page 4, line 3. MPEP §2144.03 states that ‘when a rejection is based on facts within the personal knowledge of the examiner, the data should be stated as specifically as possible, and the facts must be supported, when called for by the applicant, by an affidavit from the examiner.’’ Applicants respectfully disagree with the Examiner’s assertion that it would have been obvious to one of ordinary skill in the art that such a coating would work equally well in any such position along the optical path and that placement of the coating could be changed for considerations such as ease of assembly. If this rejection is maintained, Applicants respectfully request the Examiner to provide support of the fact that it was well known in the art at the time of the invention.

In paragraph 9 of the Office Action, the Examiner admits that ‘Bowen et al. does not specifically describe the attenuator as capable of reflecting, scattering or absorbing optical energy. However, Examiner takes official notice that filters are well known in the art to have such properties.’’ See page 4 of the Office Action. Applicants respectfully disagree with the Examiner’s assertion that the attenuator is capable of reflecting, scattering or absorbing optical energy is well known in the art. If this rejection is maintained, Applicants respectfully request the Examiner to provide support of the fact that it was well known in the art at the time of the invention.

In paragraph 10 of the Office Action, the Examiner further admits that “Bowen et al. does not specifically describe the attenuator as comprising smoked glass, frosted-glass, wavy-glass roughened inner surfaces or bubbles on an inner surface of portions of an optical fiber for an attenuator. However, Examiner takes official notice that such fibers are well known in the art to act as attenuators.” Moreover, in paragraph 11, the Examiner further admits that “Bowen et al. does not specifically describe the optoelectronic device as an oxide vertical cavity surface emitting laser. However, Examiner takes official notice that oxide vertical cavity surface emitting lasers are well known in the art as common type of active transmitter.” See page 4 of the Office Action. Applicants respectfully disagree with the Examiner’s assertions that “the attenuator as comprising smoked glass, frosted-glass, wavy-glass roughened inner surfaces or bubbles on an inner surface of portions of an optical fiber for an attenuator” and “the optoelectronic device as an oxide vertical cavity surface emitting lasers” are well known in the art. If these rejections are maintained, Applicants respectfully request the Examiner to provide support of the fact that it was well known in the art at the time of the invention.

Since the independent Claims 24, 47, 59, and 70 contain similar limitations as Claim 1, Claims 24, 47, 59, and 70 should also be in condition for allowance. Because Claims 2-23, 25-46, 48-58, 60-69, and 71-80 depend from allowable independent Claims 1, 24, 47, 59, and 70, respectively, Claims 2-23, 25-46, 48-58, 60-69, and 71-80 should also be allowable. Federal Circuit has ruled that if independent claims are valid, the claims that depend from the independent claims should also be valid as matter of law. See *Jenric/Pentron, inc. v. Dillon Co.*, 205 F.3d 1377, 1382 (Fed. Cir. 2000).

The Examiner further rejected Claims 50, 61 and 72 under 35 U.S.C §103(a) as being unpatentable over Bowen and Gregory and further in view of U.S. patent No.

4,145,110 to Szentesi. As mentioned above, because Claims 50, 61 and 72 depend from allowable Claims 47, 59 and 70, respectively, Claims 50, 61 and 72 are also allowable.

CONCLUSION

Based on all of the above, Applicants believe all claims now pending in the present application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

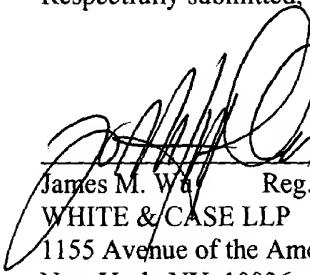
A petition for extension of time for one (1) month is enclosed. No other fees are believed to be due at this time. However, in the event that any further fees are required for this extension or any other matter concerning this response, then such fees are hereby authorized to be charged to White & Case LLP Deposit Account 23-1703.

Applicants thank the Examiner for carefully examining the present application and if a telephone conference would facilitate the prosecution of this application, the Examiner is invited to contact Jim Wu at 650-213-0300.

Respectfully submitted,

Dated: April 11, 2003

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## APPENDIX

### Version with Markings to Show Changes Made

#### Cross Reference to Related Applications:

This application is related to the following co-pending applications, each assigned to the Assignee of the present invention.

Application No. 09/749,279, filed December 26, 2000, entitled "Apparatus For Holding An Optical Element";

Application No. 09/749,281, filed December 26, 2000, entitled "An Apparatus And Method Of Using Flexible Printed Circuit Board In Optical Transceiver Device" (as amended);

Application No. 09/749,283, filed December 26, 2000, entitled "Optoelectronic Mounting Structure";

Application No. 09/749,284 filed December 26, 2000, entitled "Optical Transmitter, Receiver or Transceiver Module";

Application No. 09/749,285, filed December 26, 2000, entitled "Housing And Mounting Structure";

Application No. 09/749,286, filed December 26, 2000, entitled " Optical Power Control System"; and

Application No. 09/749,287, filed December 26, 2000, entitled "Process for Coupling Optical Elements to Optoelectronic Devices".

## Abstract

An apparatus and method of attenuating and/or conditioning optical energy for [attenuator or conditioner apparatus is provided that is used in conjunction with] an optical transmitter, receiver or transceiver module is disclosed. An apparatus for attenuating the optical output of an optoelectronic connector [comprises] including: [(1)] a mounting surface; [(2)] an array of optoelectronic devices [adapted to the mounting surface, the optoelectronic devices] having at least a first end; [(3)] an array of optical elements [, the array of optical elements] having at least a first end; [(4)] the first end of the array of optical elements optically aligned with the first end of the array of optoelectronic devices; [in such a manner that one or more optical elements is optically aligned to one or more optoelectronic devices; (5)] an optical path extending from the first end of the array of optoelectronic devices [, proceeding into the array of optical elements] and ending at a second end of the array of optical elements; and [6] an attenuator in the optical path [, where the attenuator functions to] for attenuating [attenuate] the optical energy emitted from the array of optoelectronic devices. Alternatively, a conditioner may be adapted in the optical path [, where the conditioner functions to condition the launch of the optical energy into the fiber by] for conditioning the optical energy emitted from the array of optoelectronic devices.